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APPARATUS FOR ERASING AND CLEANING A MARKER BOARD

Cross-Reference to Related Applications

The present application relates to and claims priority from provisional application number 60/404,881 filed on August 21, 2002, the contents of which are incorporated herein by reference.

Field of the Invention

This invention relates to an apparatus for erasing and cleaning white boards and in particular to an apparatus that combines a whiteboard eraser with a cleaning fluid container. The cleaning-fluid container having cleaning solution used to clean the whiteboard.

Background of the Invention

In recent years, the use of dry erase markers has become increasingly more popular. Most dry erase markers are designed for use on relatively non-porous writing surfaces, such as plastic, mylar, films, porcelain or porcelain-like surfaces and other similar types of surfaces. A very common term used for boards and walls having these types of surfaces is a "whiteboard." For these whiteboards, many types of markers are

used for writing thereon. Typically, whiteboard markers have a particular formulation that substantially prevents the ink from permanently adhering to the non-porous writing surface. This ink dries on the surface of the whiteboard leaving a thin film. Previously, the materials used in erasers for erasing the dried ink of a dry erase marker have been
5 similar to conventional chalkboard erasers. The dried film is relatively easily erased with a variety of materials or devices, but most commonly with an eraser made of bristles (many different known types of materials can be used for the bristles), felt, cloth or even the user's finger.

During presentations there is often a need to illustrate some point or some
10 diagram by displaying it on a marker board or whiteboard. Just as with the conventional chalkboard, the information on a marker board is erased at the completion of the meeting or session. On a routine basis, in addition to erasing the board, it is necessary to clean the marker board using a liquid cleaning solution. The container of cleaning solution usually has a sprayer at the end in order to spray the solution onto the board. The eraser is then
15 used to wipe the solution across the board in order to clean to board.

The eraser, cleaning solution and markers are usually stored on a tray attached to the bottom of the marker board. However, in some instances, these items will be moved from their usual storage location or get separated by some other means. The result of the separation is that time is spent trying to locate the eraser or the cleaning solution. There
20 remains a need to a means to keep track of the eraser and cleaning solution container.

Summary of the Invention

It is objective of the invention to provide a combination marker board eraser and cleaning fluid container.

It is a second objective of the present invention to provide a more ergonomically
5 efficiently means to erase and write on boards and other writing surfaces by allowing a user to keep track of marker board tools.

It is a third objective of the present invention to provide a bracket device that can be attached to a marker board eraser that can hold a cleaning fluid container.

The present invention is an ergonomically designed apparatus comprising an
10 eraser and spray container attached together with a bracket that results in one device that enables a user to erase and clean with the same apparatus. One embodiment of this invention comprises a spray container and marker board eraser attached together and enables the user to purchase both simultaneously and apply the cleaner fluid efficiently as needed.

15 A second embodiment comprises a spray container apparatus that can be retrofitted/attached to an existing marker board eraser by a clamping mechanism. This embodiment provides the same efficiently to the user as the first embodiment.

A third embodiment comprises a spray container apparatus that can be retrofitted/attached to an existing marker board eraser via an adhesive material, a screw
20 or some other mechanism and offer and provide the same efficiency to the user as the other previously mentioned embodiments.

The fourth embodiment comprises a spray container for the cleaning solution, the eraser and a compartment on the maker board eraser to contain the markers used to write on the marker board. The marker spray container and the marker board eraser are
25 attached and allow the user to have access to all of the items needed when using a marker board. During a presentation a user can hold the markers in the marker compartment on the eraser device. At the completion of the presentation, the cleaning solution in the container can be applied to the marker board and wiped away in order to remove any tough marks and clean the board. This invention results in less frustration when using the
30 conventional separate spray bottle and eraser.

Description of the Drawings

Figure 1 is an expanded view of the elements in the apparatus of the present invention.

5 Figure 2 is a side of the elements in the apparatus of the present invention.

Figure 3 is an expanded front view of the elements in the apparatus of the present invention.

Figure 4 is an expanded rear view of the elements in the apparatus of the present invention.

10 Figure 5 is a front view of the apparatus of the present invention.

Figure 6 is a rear view of the apparatus of the present invention.

Figure 7 is an expanded side view of the apparatus of the present invention.

Figure 8a is a side view of a hanging device for the apparatus of the present invention when the apparatus is not in use.

15 Figure 8a is a front view of the hanging device for the apparatus of the present invention when the apparatus is not in use.

Detailed Description of the Invention

The present invention enables the user of the apparatus to erase and clean a marker board with one apparatus. Referring to Figure 1, the present invention comprises a bracket that attaches to an eraser and has the capability to hold a cleaner container. The bracket has a generally rectangular shape and comprises a top portion 10 that connects with and attaches to a bottom portion 11. The top bracket section 10 has a front end, a rear end and two sides. The top bracket section can have a curved (convex) shaped surface. The front of the top bracket section 12 has a substantially flat surface with a half circle opening 13 in this flat surface. Along the each side are attachment means 14 that attach the top bracket section to the bottom bracket section 11. Within the top bracket section at a point between the front and rear ends is a first surface section similar to the front end. This section, not shown, also contains the half circle portion that is aligned with the half circle opening 13 in the front end. The half circle in this first section can accommodate a container of cleaning solution. The top bracket section has a rear end 15. This end is substantially flat.

Figure 1 also shows a bottom bracket section 11. This section has a rectangular shape similar to the top bracket section. This bottom bracket section has topside that has a concave internal surface. The front end 16 of this section has a half circle in the front-end surface similar to the front end of the top bracket section 12. This half circle is aligned with the half circle in the front end of the top bracket section such that when the top and bottom bracket sections come together a circle is formed by the two half circles (see Figure 3). The bottom section can also have attachment means on the sides that are aligned with the attachment means of the top bracket section. When the top and bottom sections come together, the attachment means of the two sections engage to cause the sections to attach. Figure 3 shows the front view of the bracket when the top and bottom sections are attached to each other.

Referring back to Figure 1, the topside of the bottom bracket section, at a point between the front and rear ends is a first surface section similar to and aligned with the similar first section of the top bracket section. This topside can also contain a second surface between the first surface and the rear end of the bottom section of the bracket.

This second surface can be spaced at a distance from the first section such a container of cleaning solution can fit in and extend back toward the rear end of the bracket. As shown in Figure 1, a container of cleaning solution can fit between the top and bottom sections of the bracket when the top and bottom sections are connected together.

5 Still referring to Figure 1, the bottom side of the bottom section contains an extension **18** at the front end of the bottom side. This extension is used to hang the apparatus of the present invention along the tray of a marker board. A second extension **19** is located between first extension **18** and the rear end of the bracket. An extension **20** is located between extension **19** and the rear end of the bracket. The extension **20** is
 10 located at a distance from extension **19** such that an eraser of standard size can fit between extensions **19** and **20**. Extensions **21** and **22** are also located on both sides of the bottom section. All of the extensions **19**, **20**, **21** and **22** assist in holding the eraser in a stable position during use. On the bottom side of the bottom bracket, there can be an adhesive means **23** to secure the eraser **24** to the bottom bracket.

15 Figure 2 is a side view of the present invention. In this view, the top and bottom sections of the bracket are attached to each other. The eraser **24** is attached to the bracket **10**. A cleaning container **25** containing cleaning fluid extends from the front end of the apparatus.

Figure 3 is an expanded front view of the elements in the apparatus of the present
 20 invention. Shown in this view are the half circles in the top and bottom sections of the bracket. The cleaning container **25** fits into the circle opening created when the top and bottom sections are attached to each other. Figure 4 is an expanded rear view of the elements in the apparatus of the present invention.

Figure 5 is a front view of the apparatus of the present invention. In this view the
 25 top and bottom are connected together. Figure 6 is a rear view of the apparatus of the present invention with the top and bottom sections of the bracket connected.

Figure 7 shows an expanded side view of the invention. This view enables one to see the components as previously described.

In some cases, the marker board may not have a tray from which to hand the
 30 apparatus of the present invention when it is not in use. In those cases, a hanger device as shown in Figures 8a and 8b can be attached to the wall adjacent the marker board. This

device comprises flat surface **26** and a hook shaped top end **27**. An attaching material **28** affixed to the backside of the device provides a means to attach the device to the wall.

In another embodiment, the bracket **10** can be a piece bracket. In this embodiment the two sections are permanently connected to form this one piece. In
5 addition, the side extensions **21** and **22** can be moveable to accommodate various sizes of erases.

The material used in the preferred embodiment is a plastic type material. The adhesive material can be a type such as Velcro.

When a user has marked on a board and desires to now erase and clean the
10 board, the user simply uses the eraser to first remove the markings. After the removal of the markings on the board, the user can spray cleaning solution from the container onto the board and use the eraser to remove the cleaning solution and further clean the board. This process only requires the use of the one apparatus of the present invention.

The apparatus of this invention provides significant advantages over the current
15 art. The invention has been described in connection with its preferred embodiments. However, it is not limited thereto. Changes, variations and modifications to the basic design may be made without departing from the inventive concepts in this invention. In addition, these changes, variations and modifications would be obvious to those skilled in the art having the benefit of the foregoing teachings. All such changes, variations and
20 modifications are intended to be within the scope of this invention.